

**iTECHWORLD**  
THE POWER EXPERT

# User's Manual

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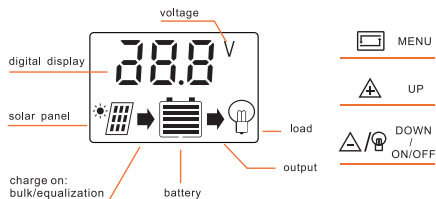
## Safety Instructions

1. Make sure your battery has enough voltage for the controller to recognize the battery type before first installation.
2. The battery cable should be as short as possible to minimize power loss.
3. This solar regulator is preset to suit lithium Ion batteries. (Please set the controller to the correct battery type when using.)
4. The charge regulator is only suitable for regulating solar modules. Never connect another charging source to the charge regulator.
5. The controller will get hot when it is working, please install the controller on a smooth, well ventilated surface.

## Product Features

1. Built-in industrial micro controller.
2. LCD display with adjustable parameters.
3. Fully 3-stage PWM charge management.
4. Built-in short-circuit protection, open-circuit protection, reverse protection, over-load protection.
5. Dual mosfet reverse current protection, low heat production.

## LCD Display/Key

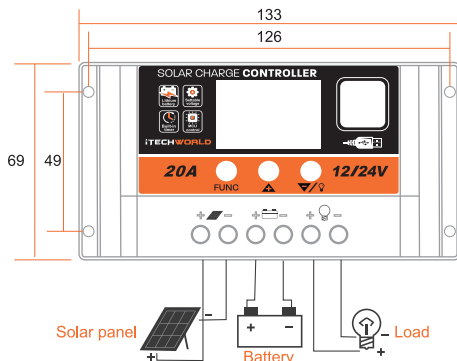


- menu: switch between different display, or to enter/exit setting by long press.
- up: press to increase value.
- down: press to decrease value.

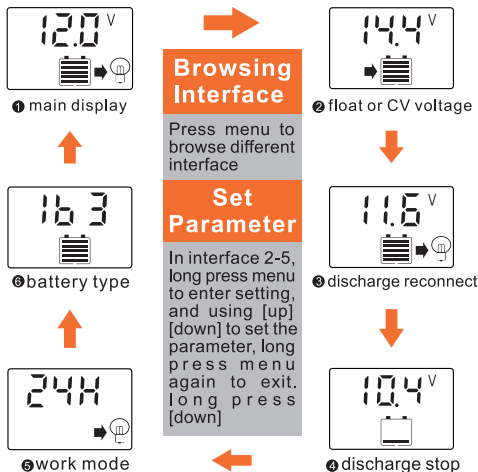
## System Connection

1. Connect your battery to the charge regulator positive+ and negative-
2. Connect your solar panel to the solar input positive+ and negative-
3. Connect your load to the charge regulator positive+ and negative-

The reverse order applies when deinstalling!  
An improper sequence order can damage the controller!



## Display/Setting



- Attn: 1. Press the [down] button to on/off load manually at main display.  
2. The work mode is working as below:  
[24H] Load output 24 hours  
[1-23H] Load on after sunset and closed after, setting hours [0H] Dusk to dawn

## Trouble Shooting

Situation	Probable Cause	Solution
Charge icon not on when sunny	Solar panel opened or reversed	Reconnect
Load icon off	Mode setting wrong	Set again
	Battery low	Recharge
Load icon slow flashing	Over load	Reduce load watt
Load icon fast flashing	Short circuit protection	Auto reconnect
Power off	Battery too low/Reverse	Check battery/Connection

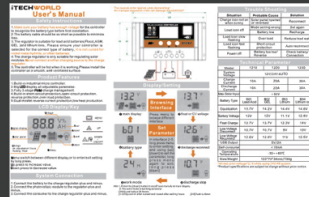
## Technical Parameter

Model	2420	2440		
System Voltage	12V/24V AUTO			
Charge Current	10A	20A	30A	40A
Discharge Current	10A	20A	30A	40A
Max Solar Input	< 50V			
Default Battery Type	1B3 (3.2V*4)(12V)(Lithium Lifepo4)			
Float Charge	14.4V (default, adjustable)			
LVD	10.4V (default, adjustable)			
LVR	11.6V (default, adjustable)			
Battery Type	LifePo4		Gel	
Code	1b3	2b3	1b1	2b1
Battery Charge	12V	24V	12V	24V
Float Charge	14.4V	28.8V	13.7V	27.4V
Discharge Cut-off voltage	10.4V	20.8V	10.7V	21.4V
Discharge Recovery voltage	11.6V	23.2V	12.6V	25.2V
Constant Voltage	14.4V	28.8V	14.4V	28.8V

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